



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/662,561  | 09/15/2003  | Michael J. Rocke     | 80107.077US1                | 9743                   |
| <div>7590      05/09/2007</div> <div>LeMoine Patent Services, PLLC<br/>c/o PortfolioIP<br/>P.O. Box 52050<br/>Minneapolis, MN 55402</div> |             |                      |                             |                        |
|   |             |                      | EXAMINER<br>RUTHKOSKY, MARK |                        |
|   |             |                      | ART UNIT<br>1745            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>05/09/2007     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
4a) Of the above claim(s) 13-29 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 4/13/06, 6/12/06, 3/20/2007 .
- 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_ .  
 5) ☐ Notice of Informal Patent Application  
 6) ☐ Other: \_\_\_\_\_ .

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statements filed 4/13/2006 and 6/12/2006 have been placed in the application file, and the information referred to therein has been considered as to the merits.

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1-12 and 30-33, in the reply filed on 10/26/2006 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The claims are to an apparatus, which is a product. Language that suggests or makes optional, but does not limit the claims to a particular structure does not limit the scope of the claims or claim limitation. MPEP 2106c and 2111.04 reasons that statements of intended use, and language including “adapted to” or “adapted for” clauses, and “wherein” or “whereby”

Art Unit: 1745

clauses, which do not limit claims to a particular structure, do not limit the scope of a claim. The instant claims include intended use language. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. When the prior art structure is capable of performing the intended use, it meets the claim. The phrases including “adapted to” and “configured to” do not limit claims to a particular structure, but recite a use of the claimed structure. These limitations are not given patentable weight.

Claims 1-3, 9-10, 12, and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukazu et al. (US 2002/0011327.)

The instant claims are to an apparatus comprising a fuel cell; an integrated circuit; and a cooling system to cool the fuel cell and the integrated circuit; wherein the cooling system includes a fluid medium to remove heat from the fuel cell and the integrated circuit.

Fukazu et al. (US 2002/0011327) teaches an apparatus comprising a fuel cell; an integrated circuit; and a cooling system to cool the fuel cell and the integrated circuit; wherein the cooling system includes a fluid medium to remove heat from the fuel cell and the integrated circuit (see paragraphs (0025-29, 33, 57, figures 1-3, and claims 1-6.) The cooling system includes water that goes through a phase change to a vapor at 100 C (p. 54.) Condensers are noted (p. 29.) A power control unit is noted (p. 29, 57-60.) The unit processes information and determines allocations of electrical power for the fuel cell and other electronic devices. The reference does not specifically teach an antenna, however, the circuit is connected to a number of

Art Unit: 1745

metal members, including cooling fins, which will inherently function as an antenna. Thus, the claims are anticipated.

Claims 1-3, 9-12, and 30-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Gottmann al. (US 2003/0157386.)

Gottmann al. (US 2003/0157386) teaches an apparatus comprising a fuel cell; an integrated circuit; and a cooling system to cool the fuel cell and the integrated circuit; wherein the cooling system includes a fluid medium to remove heat from the fuel cell and the integrated circuit (see paragraphs (0039-40, 71-76, 78-82, figure 3, and claims 1-61.) The cooling system includes water that goes through a phase change to a vapor at 100 C and lithium bromide (p. 76.) Condensers are noted. A power control unit is noted (p. 29, 57-60.) The unit processes information and determines allocations of electrical power for the fuel cell and other electronic devices. The fuel cell may be used in a computer (77-78.) The reference does not specifically teach an antenna, however, the circuit is connected to a number of metal members, including cooling fins, which will inherently function as an antenna. Thus, the claims are anticipated.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1745

Claims 1-12 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukazu et al. (US 2002/0011327) OR Gottmann al. (US 2003/0157386) in view of Margiott et al. (US 6,519,510.)

The teachings of Fukazu et al. (US 2002/0011327) and Gottmann al. (US 2003/0157386) have been presented. The references do not teach an apparatus, as claimed, that includes a temperature sensor. Margiott et al. (US 6,519,510), however, teaches a heat and power fuel cell system that includes a controller that is connected to a temperature sensor (claims 1-3, col. 5, lines 40-end.) The fuel cell system includes a controller that changes that state of operation in response to the temperature sensed. The pump and cooling fan may be adjusted in response to temperature changes (col. 5, lines 40-end.) A load control means and a processor are noted. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a temperature sensor as taught by Margiott et al. (US 6,519,510), in order to maintain thermal control of the fuel cell system and use the temperature sensors to monitor and adjust the system at various states of operation as taught in cols. 5-6 of the Margiott reference. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a temperature sensor as taught by Margiott et al. (US 6,519,510), in the integrated circuit in order to monitor the temperature of the circuit and adjust the coolant flow or circuit use and maintain safe operating temperatures. The artesian would have found the claimed invention to be obvious in light of the teachings of the references.

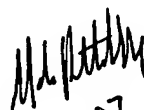
Art Unit: 1745

***Examiner Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky  
Primary Patent Examiner  
Art Unit 1745

  
5.1.07